

Milledgeville and Eatonton Railroad, causing loss of life and considerable injury to property. After leaving Nona the cloud moved in an easterly direction.—*Atlanta (Ga.) Constitution.* South Carolina.—Pacolet, Spartanburgh Co.: about 6 a. m. a tornado passed about a half a mile from this place, and all houses, crops, and lumber over a stretch of country about one-fourth of a mile wide suffered from its ravages.—*Charleston (S. O.) News and Courier.* North Carolina.—Wilmington: a high northwest gale began 9.10 a. m. and ended 1.45 p. m.; maximum velocity of wind, thirty-six miles per hour at 12.10 p. m. Several trees and one frame building were blown down.—*Report of Signal Service observer.*

21st. Georgia.—Augusta: a severe snow storm prevailed steadily all day, followed at night by rain and sleet. The approximated depth of snow, which melted as it fell, was about six inches.—*Report of Signal Service observer.* South

Carolina.—Columbia: snow began at 8.20 a. m. and ended 6.30 p. m., followed by sleet and rain, which ended during the night. It was the heaviest fall of snow within the recollection of citizens.—*Report of Signal Service observer.* Gaffney City, Spartanburgh Co.: the deepest snow here in twenty years fell this date; depth twelve to fourteen inches.—*Charleston (S. C.) News and Courier.*

21st-22d. Michigan.—Sault de Ste. Marie: high wind, accompanied by blinding snow, began the evening of the 21st, and continued throughout the following day. Maximum velocity of wind one hundred and thirty-two miles per hour from the northwest, at 5 p. m., 22d. The wind was the severest ever experienced at this place, and caused much damage to the telegraph, telephone, and electric light wires. Trains due here from various points were blockaded by the drifting snow.—*Report of Signal Service observer.*

INLAND NAVIGATION.

STAGE OF WATER IN RIVERS AND HARBORS.

In the following table are shown the danger-points at the various stations; the highest and lowest depths for February, 1889, with the dates of occurrence and the monthly ranges:

Heights of rivers above low-water mark, February, 1889 (in feet and tenths).

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Date.	Height.	Date.	Height.	
<i>Red River:</i>						
Shreveport, La.	29.9	3	31.9	28	20.5	11.4
<i>Arkansas River:</i>						
Fort Smith, Ark. ...	22.0	1	9.0	18, 19	3.7	5.3
Little Rock, Ark. ...	23.0	1	13.4	19	6.8	6.6
<i>Missouri River:</i>						
Leavenworth, Kans. ...	20.0	20, 21	4.8	12	3.0	1.8
Kansas City, Mo. ...	21.0	24-28	5.7	6, 7, 13-16	5.1	0.6
<i>Mississippi River:</i>						
Saint Paul, Minn. ...	14.5	.....	.....	.....	.....	.....
La Crosse, Wis. ...	24.0	.....	.....	.....	.....	.....
Dubuque, Iowa ...	16.0	.....	.....	.....	.....	.....
Davenport, Iowa ...	15.0	.....	.....	.....	.....	.....
Keokuk, Iowa ...	14.0	23	3.3	6, 13	6.8	2.5
Saint Louis, Mo. ...	32.0	19	6.7	27	2.7	4.0
Cairo, Ill.	40.0	26, 27	32.7	17	13.8	18.9
Memphis, Tenn. ...	34.0	28	25.4	19	11.0	14.4
Vicksburg, Miss. ...	41.0	1	33.2	24	20.8	12.4
New Orleans, La. ...	13.0	15, 16, 17	12.4	26, 27	8.9	3.5
<i>Ohio River:</i>						
Pittsburgh, Pa.	22.0	18	18.0	16	2.9	15.1
Parkersburg, W. Va. ...	38.0	21	22.2	16	5.9	16.3
Cincinnati, Ohio ...	50.0	22	38.3	16	13.4	24.9
Louisville, Ky.	25.0	23	13.9	16	6.9	7.0
<i>Cumberland River:</i>						
Nashville, Tenn. ...	40.0	21	35.6	15	6.0	29.6
<i>Tennessee River:</i>						
Knoxville, Tenn. ...	29.0	19	15.0	15	1.9	13.1
Chattanooga, Tenn. ...	33.0	18	29.6	15	6.2	23.4
<i>Monongahela River:</i>						
Pittsburgh, Pa.	29.0	18	18.0	16	2.9	15.1
<i>Savannah River:</i>						
Augusta, Ga.	32.0	18	33.3	14	9.8	23.5
<i>Willamette River:</i>						
Portland, Oregon ...	15.0	23, 24	3.5	11	0.0	3.5

•Frozen.

ICE IN RIVERS AND HARBORS.

The following reports relative to ice in rivers and harbors have been made by Signal Service observers:

Thames River.—New London, Conn.: the river froze over on the 25th, the ice being sufficiently strong to interrupt navigation. Floating ice in harbor, 26th and 27th.

North (Hudson) River.—New York City: floating ice in river, 10th to 15th, 25th, 26th.

East River.—New York City: floating ice in river, 10th, 25th.

Monongahela River.—Pittsburgh, Pa.: floating ice in river, 6th, 18th, 24th to 27th. The river was frozen over and navigation closed to points above Lock No. 1 on the 7th; navigation was again resumed on the 20th.

Allegheny River.—Pittsburgh, Pa.: ice in river, 1st to 5th, 7th to 9th, 18th, 21st, and 27th.

Ohio River.—Parkersburg, W. Va.: floating ice in river, 2d to 16th, 20th. Ice caused a partial suspension of navigation from the 6th to 9th.

Saint Clair River.—Port Huron, Mich.: the steamer "Mary," plying between this port and Marine City, Saint Clair Co., Mich., discontinued her regular trips on the 6th, this being the latest date in six years that the steamer has been compelled to lay up on account of ice; floating ice in river, 10th; the river froze for the first time this winter on the 14th.

Mississippi River.—Keokuk, Iowa: floating ice, 5th. River froze over for the first time this season on the 24th and 25th.

Missouri River.—Leavenworth, Kans.: floating ice in river, 1st, 6th, 7th, 18th to 23d. The river froze over for the first time this season on the 24th.

Lake Michigan.—Milwaukee, Wis.: 28th, navigation between this and the east shore ports, by the regular line steamers, has been interrupted considerably during the month by ice. Milwaukee Bay has been blocked with ice several times, and at the close of the month there were large fields of floating ice in the southern part of the lake.

FLOODS.

Chattanooga, Tenn.: the heavy rains from the 14th to 17th caused the Tennessee River to rise above the danger line on the 18th. A portion of the city was inundated and considerable damage was done to foundations of buildings, causing walls to cave in, etc. Train men reported high water and land slides along the various railroads.

Augusta, Ga.: the Savannah River continued to rise very rapidly during the 18th, attaining its highest point at 11 p. m. A number of streets in the lower portion of the city were submerged and all the mills were compelled to close. The river began to fall after midnight.

ATMOSPHERIC ELECTRICITY.

AURORAS.

Faint auroral displays were reported as far south as Egg Harbor City, N. J. West of the Atlantic coast no auroras were reported south of the fortieth parallel. The only notable displays reported during the month are described as follows:

Saint Vincent, Minn.: aurora began 8.30 p. m., 26th, and ended during the night. The display was in the form of an arch; azimuth 90°; altitude 8° to 10°. Maximum brilliancy about 1 a. m., 27th. Quite a brilliant aurora began 9 p. m., 28th, and ended during the night. It was in the form of an